Rhizosolenia sp. ?

Stephanogonia (*Mastogonia*) *actinoptychus* Ehr., rare.

Stephanopyxis appendiculata Ehr.

S. corona (Ehr.) Grun.

S. turris (Grev.) Ralfs, rare.

Stictodiscus Trunanii Witt. ?, very rare, 90 ft. This form differs from that figured by Truan and Witt. (Die Diat. der Polycyst. von Jeremie in Hayti, *pl. 4. figs. 23 & 24*), inasmuch as the rim is less definite and the outline slightly irregular. Only one imperfect specimen was found. It appears to form another link between the continental and insular deposits.

Triceratium condecorum Ehr., rare, 90 ft.

T. Kainii E. A. Schultze, rare, 120 ft.

T. semicirculare Brightw.=*Euodia Brightwellii* Ralfs.

T. spinosum (Ehr.) Bail.

New Species of Parasitic Fungi.

By S. M. Tracy and F. S. Earle.

[Type specimens in the herbaria of the authors, of the U. S. Department of Agriculture, of Rutgers, Harvard and Columbia Colleges.]

Puccinia notabilis n. sp. III. Amphigenous; sori black, confluent, forming small hemispherical or irregular masses on the bracts and petioles or involving the larger stems, forming fusiform black gall-like swellings two or three times their diameter and 3–4 cm. in length; teleutospores uniformly oval and obtusely rounded, slightly constricted, epispore smooth, thickened at the apex, 55–60 by 30–33 μ; pedicel hyaline or slightly tinted, very long and flexuous, 225–275 μ.

On Arrow-wood (*Pluchea borealis ?*) Rio Penasco, New Mexico, January, 1895.

Puccinia Paspali n. sp. II. Usually hypophyllous, sometimes amphigenous; sori linear, sometimes confluent, dark brown; uredospores globose or obovate, very abundantly and sharply echinulate, brown, 24 by 25–30 μ. III. Sori linear, darker than te uredo sori, usually on the leaf sheaths; teleutospores irregular, 35 by 27 to 30 by 35 μ, usually oval, much constricted, with the slender nearly hyaline pedicel attached obliquely to one side of the lower end, often orbicular with the septum vertical and the

pedicel attached either to the septum or near it, and the epispore of both cells distinctly thickened at the apex.

On *Paspalum virgatum*, New Orleans, La., November, 1894.

USTILAGO CRUS-GALLI n. sp. Involving the panicles and upper nodes, making the panicles abortive and forming pustules sometimes 1 cm. in diameter at the nodes; spore masses powdery, black, at first covered by a gray membrane; spores oval or subglobose, fuscous, sharply echinulate, 9–10 by 11–13 μ.

On *Panicum Crus-galli*, Salt Lake City, Utah, August, 1887.

This seems to approach *U. Maydis*, but the spores, though equally echinulate, are uniformly larger and more elongated.

USTILAGO TONGLINENSIS n. sp. Spore masses infesting the ovaries and causing the glumes to open widely at maturity, black; spores globose, dark brown, sharply and thickly echinulate, 9–11 μ.

On *Ischaemum ciliare*, Tonglin, Singapore. H. N. Ridley.

USTILAGO ORNATA n. sp. Infesting the ovaries. Spore masses black, pulverulent, 20–30 mm. in diameter; spores subglobose, very thickly beset with strong and prominent echinulations which give the spore a burr-like appearance, 12–12 by 15 μ. Panicles bearing affected ovaries always remain partially enclosed within the sheath of the upper leaf.

On *Leptochloa mucronata*, Starkville, Miss., November, 1894.

USTILAGO PERTUSA n. sp. Infesting the ovaries; spore masses hard and compact, black, finally pulvinate; spores small, globose, epispore covered with prominent irregular verrucose projections, 5–7 μ.

On *Setaria macrochaeta*, Queensland. F. M. Bailey, 1890.

USTILAGO PUSTULATA n. sp. Infesting the ovaries, or forming rounded bullate swellings which often surround the entire stem and branches of the panicle, or form irregular distortions on the leaves and sheaths; spore masses dark brown, long covered by a stramineous membrane which is a distortion of the tissues of the host, 25–75 mm. in diameter; spores dark brown or fuscous, subglobose or oval, cell-wall very thin, slightly echinulate, 7.5 to 9 μ., or 7 by 9 μ.

On *Panicum proliferum*, Starkville, Miss., October, 1894.

DIMEROSPORIUM MAGNOLIAE n. sp. Epiphyllous, on small indefinite areas; mycelium of dark brown irregular branching and septate hyphae; conidia clavate, dark colored, 4–5-septate, 7–8 by 45–55 μ; perithecia depressed-hemispherical, black, usually in clusters of 5 to 10, astomous, 50–100 μ; asci numerous, broadly oval or obovate, 8-spored, 35–40 by 45–50 μ, paraphysate; paraphyses thread-like, colored towards the tips; sporidia biseriate, at

first hyaline, dark fuliginous when mature, obovate, 1-septate, constricted, 9-10 by 20-23 μ.

On living leaves of *Magnolia Virginiana*, Ocean Springs, Miss., May, 1894.

ASTERIDIUM ILLICII n. sp. Hypophyllous; mycelium none; perithecia black, scattered, orbicular, aplanate, membranaceous, cellular, not radiant, fragile, wrinkled, 200–400 μ; asci numerous, suborbicular, 8-spored, 30–40 μ; sporidia subpyriform, often curved, granular, colorless, at first uniseptate, becoming 3-septate at maturity.

On living leaves of *Illicium Floridanum*, Ocean Springs and Biloxi, Miss., March, 1889.

LAESTADIA ILLICIICOLA n. sp. Amphigenous, occupying large irregular brownish subarid definitely limited areas, usually involving the apical half of the leaf; perithecia very numerous, scattered, erumpent, more abundant on the upper surface, black, membranaceous, suborbicular or lenticular, obscurely ostiolate, finally collapsing; asci without paraphyses, clavate, stipitate, thickened at the apex, 40–50 by 10–12 μ; sporidia ovoid or fusiform, continuous, hyaline, granular, about 15 by 5 μ.

On living leaves of *Illicium Floridanum*, Ocean Springs, Miss., March, 1892.

SPHAERELLA ANDROMEDAE n. sp. Hypophyllous; spots none; perithecia abundant, scattered, often covering the entire lower surface of the leaf, black, erumpent, ostiolate, at length collapsing; asci obovate, somewhat thickened at the apex; sporidia oval, hyaline, uniseptate, cells about equal; 7–8 by 2.5–3 μ.

On living leaves of *Pieris nitida*, Ocean Springs, Miss., March, 1888.

LEMBOSIA ANGUSTIFORMIS n. sp. Epiphyllous, on raised brown irregularly stellate blisters; mycelium scant; perithecia black, long and narrow, often flexuous, seldom branched, 60–80 by 175–300 μ; subiculum reduced to a few short flexuous slightly fuscous branching threads; asci broadly oval, about 15 by 18 μ; sporidia obovate, somewhat unequally uniseptate, constricted, at first hyaline, becoming light fuliginous, 8–10 by 4–5 μ.

On *Ilex coriacea*, Ocean Springs, Miss., May, 1894; Biloxi, Miss., July, 1894.

This differs widely from the following in gross appearance on the leaf, in the narrower perithecia, less conspicuous subiculum and smaller asci and sporidia.

LEMBOSIA PRINOIDES n. sp. Epiphyllous, on orbicular pallid

spots; mycelium scant, brown; perithecia scattered, black, subcarbonaceous, fimbriate-margined, elliptical, subacute, often forking, 200–350 by 120–150 μ; subiculum of dark brown irregular nodular usually continuous and branching brittle threads; asci ovate, 8-spored, 30–35 by 15–18 μ; sporidia elliptical, unequally uniseptate, somewhat constricted, subhyaline, becoming fuliginous, 10–15 by 4–5 μ.

On *Ilex coriacea*, Biloxi, Miss., July, 1893.

LEMBOSIA ILLICIICOLA n. sp. Epiphyllous, on large light brown orbicular or irregular areas; perithecia numerous, superficial, carbonaceous, usually linear and strict, occasionally triangularly stellate, 100 by 300–400 μ; subiculum of light brown flexuous transparent continuous variously branching and anastomosing threads; asci very numerous, oval or ovate, 8-spored, 25–30 by 12 μ; sporidia oval, uniseptate, slightly constricted, ends obtusely rounded, hyaline, at length slightly colored, 8–10 by by 3–4 μ.

On *Illicium Floridanum* with *Asteridium Illicii*, Ocean Springs, Miss., March, 1889.

VERMICULARIA STACHYDIS n. sp. Perithecia scattered, subsuperficial; setae somewhat floccose and nodular, septate, olivaceous, paler towards the tips, which are obtuse and slightly enlarged; conidia falcate, attenuate at each end but without evident basidia, guttate, at length faintly 4–5-septate, 35–40 by 3–4 μ.

On dead stems of *Stachys affinis*, Starkville, Miss., October, 1893.

This differs from other described species in the larger, at length several-septate conidia, and the weak rather light colored setae with swollen tips.

DIPLODIA MINUTA n. sp. Scattered over indeterminate whitened areas; perithecia erumpent, small, 90–120 μ, membranaceous, smooth, ostiolate; sporules minute, oval, uniseptate, not constricted, light yellow, 6–8 by 3–4 μ.

On living stems of *Tecoma radicans*, with *Pestalozzia breviaristata*, Starkville, Miss., March, 1895.

DIPLODIA SASSAFRAS n. sp. Perithecia very numerous over large areas, black, hemispherical, erumpent, finally opening by an irregular fissure; sporules numerous, ovate, fuscous or nearly black, with a very distinct hyaline septum near the smaller end, 13–14 by 5–6 μ.

On living twigs and branches of *Sassafras*, Starkville, Miss., April, 1894.

HENDERSONIA TAPHRINICOLA n. sp. Epiphyllous, on white bordered spots. Perithecia scattered, black, erumpent, at length collapsing; conidia truncate, cylindrical, fuliginous, 2–septate, constricted at the septa, 12–14 by 4–5 μ.

On old whitened blisters of *Taphrina* on *Quercus Virginiana*, Ocean Springs, Miss., February, 1887.

PESTALOZZIA CLIFTONIAE n. sp. Epiphyllous, on orbicular arid brown-bordered spots. Acervuli scattered, bursting through the dried epidermis; conidia obovate, sometimes curved; 4-septate, septa often oblique, three medial cells fuliginous, the upper two dark and opaque, the lower one paler, basal cell colorless, small, short, acute, abruptly contracted to the short stipe; apical cell reduced to a short colorless apiculus bearing the three widely divirgent setae, 16–18 by 8 μ; setae 12–14 μ.

On living leaves of *Cliftonia ligustrina*, Ocean Springs, Miss., November, 1893.

PESTALOZZIA BREVIARISTATA n. sp. Acervuli scattered over indefinite whitened areas, black, at length collapsing; conidia curved, elliptical, 5–septate, apical and basal cells colorless, medial cells fuscous, septa often diagonal, 25–27 by 7–8 μ; stipe hyaline, half the length of the conidium, somewhat swollen at the base, often deciduous; arista single, strongly oblique, thickened, scarcely one-fourth the length of the conidium.

On living stems of *Tecoma radicans* with *Diplodia minuta*, Starkville, Miss., March, 1895.

SCOLECOTRICHUM PUNCTULATUM n. sp. Amphigenous; spots indefinite; hyphae in small caespitose clusters, irregularly flexuous and nodular, olivaceous, 2–3-septate, 60–70 by 5–6 μ; conidia oval or oblong, ends obtusely rounded, fuscous, epispore distinctl granulose or punctulate, typically uniseptate but often continuous, and occasionally 3-septate, 15–20 by 6–8 μ.

On *Iris pabularia*, Starkville, Miss., January, 1894.

CERCOSPORA FLEXUOSA n. sp. Forming large indefinite effused patches on the under side of the leaf. Hyphae ferruginous, irregularly flexuous throughout, sometimes branched, many-septate, denticulate, 75–150 by 4–5 μ; conidia obclavate, fuscous, 2–6, 3–4-septate, not constricted, 20–30 by 4–5 μ.

On leaves of *Diospyros Virginiana*, Biloxi, Miss., July, 1892, and Ocean Springs, Miss., October, 1889.

This differs from *C. Diospyri* (Thum.) Cke. in its septate hyphae and much longer spores, and from other *Cercosporas* reported on the same host in the absence of definite spots.

CERCOSPORA GRAMINICOLA n. sp. Spots none; amphigenous and most abundant on the midvein; hyphae caespitose, straight or somewhat flexuous, fuscous, 2–3-septate, 75–100 by 4–5 μ; conidia clavate, continuous when young but finally becoming 1–3-septate, fuscous, 35–40 by 7.5–10 μ.

On languishing leaves of *Phleum pratense*, Starkville, Miss., November, 1894.

CERCOSPORA HIBISCI n. sp. Hypophyllous, on large indeterminate areas; hyphae fuliginous, clustered, somewhat irregular, once or twice septate near the base, 25–40 μ; conidia obclavate, somewhat curved, hyaline, guttulate, at length faintly 3–5-septate, 40–60 by 3–4 μ.

On living leaves of *Hibiscus esculentus*, New Orleans, La., November, 1894.

CERCOSPORA MARITIMA n. sp. Amphigenous; not forming definite spots, but densely effused over considerable dark-colored areas; hyphae fasciculate, mostly straight, olive brown, 5–6–septate, often swollen at the septa, 40–100 by 4–6 μ: conidia paler, elongated, straight or slightly curved, mostly uniseptate, the upper cell shorter and broader than the lower, 50–60 by 5–7 μ.

On *Croton maritimum*, Horn Island, Miss., March, 1892.

CERCOSPORA MISSISSIPPIENSIS n. sp. Amphigenous, but more abundant on the under side of the leaf. Spots small, brownish, irregular, usually bounded by the veins, surrounded by an irregular raised and darker border having a pallid outer margin; hyphae divergent, irregularly floccose, nodular, usually uniseptate above the somewhat bulbous base, 60–70 by 5 μ; conidia fuscous, narrowly clavate, tapering from the rather obtuse apex to the attenuated filiform nearly hyaline base, 4–8 or more septate, 75–150 by 4–5 μ.

On *Smilax glauca*, and *S. rotundifolia*, Starkville, Miss., November, 1893.

TETRAPLOA DIVERGENS n. sp. In black irregularly linear masses; conidia broadly oval, dark-fuliginous, 12-14 by 8-9 μ, quarternately divided, each division usually 2-septate, and terminated by an obtuse semi-transparent continuous divergent horn-like projection, 4-5 μ in length.

On living or languishing leaves of *Panicum agrostidiforme*, Starkville, Miss., October, 1894.